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ABSTRACT

The government is the largest collector and disseminator of records and documents in Sub Saharan Africa. Traditionally, the bulk of the information has been paper-based. The advent of information technology brought about digital formats. Plans for ensuring the survival of digital information are inadequate. In fact, instances have been reported whereby vital digital information has been lost as a result of obsolete technologies. Three major issues associated with managing digital documents that need to be addressed are: (1) the media is unstable compared with traditional information carriers such as paper or film; (2) access to digital information is dependent on machines and software; and (3) electronic data deteriorate over time, especially when not compliant with generic document standards. Strategies for managing digital documents over time in order to ensure that they are retrievable and usable must be developed. Skills development and collaboration with countries that have made advances in digital preservation will also be decisive. (Contains 27 references.) (Author/MES)

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Strategies for Managing Digital Records and Documents in the Public Sector in Sub Saharan Africa

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Abstract:

Government is the largest collector and disseminator of records and documents in Sub Saharan Africa (SSA). Traditionally, the bulk of the information has been paper-based. The advent of information technology brought about digital formats. Plans for ensuring the survival of digital information are inadequate. In fact, instances have been reported whereby vital digital information has been lost as result of obsolete technologies. Strategies for managing digital documents over time in order to ensure that they are retrievable and usable must be developed. Skills development and collaboration with countries that have made advances in digital preservation will also be decisive.

Background

Government is the largest producer of records and documents.[1] In fact, information is government's most critical resource. Government needs information to manage national resources, execute national functions, measure performance and deliver services.[2] Most of the information produced by government is also central and fundamental to the rights of every citizen, and to the process of democratic governance irrespective of its format. Thus, it is incumbent upon government to preserve its information and provide broad public access to it.[3]

Access to government documents is key to government accountability to its citizenry. Citizens can seek redress for acts of omission or commission by a government and its officials if they have access to

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information. Access to information is denied if desirable existing information is not available, for whatever reason. However, information technology (IT) might become one of the causes of inaccessibility of government information in Sub Saharan Africa (SSA). Whilst IT can enhance access to data, information and knowledge, on the other hand, it can easily make electronic information inaccessible over time if not appropriately managed. In order to strike a balance between the varying effects of IT, SSA should devise strategies that will harness IT potentials as well as ensure that the information and knowledge created using the tools does not disappear.

The use of IT is very crucial in a world that is characterised in terms like, "global village", "global information society", "knowledge age", and "information age".[4] In recognition of the fact that IT is one of the major drivers of modern societies, governments in SSA have formulated and implemented policies on the acquisition of IT.[5] Furthermore, every economic structural adjustment programme initiated by the World Bank included a considerable component of IT transfer and upgrading.[6]

Technological transfer and change have brought about "the additional challenge of digital preservation."[7] However, governments in SSA have not formulated strategies to deal with the challenge. Additionally, preserving and promoting access to digital information resources is not adequately addressed due to lack of training and research into procedures and standards on digital preservation.

Thus, under the present circumstances, continued access to government records and documents in digital form in SSA cannot be guaranteed within acceptable limits. It seems that continued access to and the survival of digital information in SSA will largely depend on formulating strategies for managing it.

Management of information in Sub Saharan Africa

Traditionally, the bulk of the information created by government was paper-based. New information and communication technologies (ICTs) have ushered in the production and use of digital documents. The major driving force behind the technological changes has been the computer. Computers are considered as the major solution to the inadequate government information systems in Africa.[8]

In order to address the situation, the African Information Society was launched in 1996 with a vision to build information systems to (i) enhance policy formulation, (ii) improve the quality of life of every African, (iii) increase access to information and (iv) connect Africa to the global information society.[9] Efforts to build the African Information Society have revolved around capacity building in the following areas, (i) acquisition of information and communication technologies; (ii) capturing and disseminating information timely; (iii) software development and building local content and connectivity.[10]

Very little attention, if any, is being given to preserving the integrity and usability of the information that is being generated as a result of utilising ICTs. Although capacity building in ITCs is good in itself, it tends to be a futile exercise when issues pertaining to preserving the resultant digital information are not adequately addressed. It is quite true that capacity building and global connectivity will determine how Africa is going to benefit from opportunities provided by information revolution.[11] However, policy makers and stakeholders should give preservation of digital data the same emphasis they are giving to the need to utilise ITCs.

Moreover, most ITCs projects initiated in SSA heavily rely on expatriate expertise for their management and implementation.[12] Typically, the projects take a couple of years to implement. The emphasis tends to be on the short-term processing benefits and capabilities provided by IT at the expense of managing the information being created and stored. However, when expatriates withdraw the local people come face to face with issues of managing and sustaining the computer-based projects. The management issues include

ensuring the survival of the digital information and continued access to it by present and future users. These are challenges that few, if any, SAA governments appear to be ready for.

There are at least three major issues associated with managing digital documents that need to be addressed to ensure that digital information does not disappear.[13] Firstly, the media is unstable as compared with "traditional" information carriers such as paper or film. Secondly, access to digital information is dependent on machines and software. If the appropriate technology is not available, humankind cannot read or use digital information. Rapid technological changes in the digital information industry and market inevitably lead to media obsolescence. Thirdly, electronic data deteriorate over time, especially, when it is not compliant with generic document standards such as XML and SGML.[14] Thus, data emulation and migration are necessary to maintain the integrity of the data. Consequently, the need to guarantee "technological access" to information is one of the major challenges posed by digital formats ushered in by the Information Age, particularly, in SSA.

Challenges posed by digital technology to the management of recorded information have led to the commissioning of a number of digital preservation projects by governments and organisations in the developed world.[15] Furthermore, international organisations such as the United Nations (UN) have commissioned studies to investigate the management of electronic information.[16] However, such projects are conspicuous by their absence in SSA. In a study carried out in Ghana, Uganda and Zimbabwe it was discovered that the countries do not have the capacity to manage electronic records.[17] Mrs. Ndiyoi Mutiti, Director of the National Archives of Zambia, also came to the same conclusion in her study of the technological infrastructure and needs carried out in Botswana, Kenya, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.[18]

In addition, some instances have been reported whereby vital digital information has been lost into obsolete hardware and software.[19] For instance, in Zimbabwe the Salary Service Bureau, a government department that is responsible for processing civil servants' salaries and pensions, lost all the information created and stored on computer tapes between 1980 and 1994.[20] The problem only surfaced when a newly introduced computer-based information system could not read most of the older computer tapes. Similar cases are likely to be experienced in many countries in SSA as they further embrace IT because they do not have adequate programmes for the preservation of electronic information.[21] In fact, electronic records are being created in many public institutions in SSA, and some are being mismanaged and lost. Hence, availability and accessibility to electronic information should become the major issues in the use of IT in public administration in SSA.[22]

Challenges to the preservation of digital information in Sub Saharan Africa

The transfer of technology requires the establishment of training to develop the necessary skills for its management.[23] Policy and decision-makers from Africa also identified "finding sufficient human resources to design, install, maintain and use" ITCs as one of the threats and challenges to Africa's integration into the global information society.[24] Indeed, training in the management of ICTs in SSA has been very sparse. Lack of trained staff is likely to have a negative impact on the management and preservation of electronic records in SSA. The situation is compounded by the fact that no meaningful research is being undertaken into digital preservation. In the absence of archiving standards for electronic documents and with elusive technical solutions to how best electronic information can be preserved, the continued existence of and access to government information in SSA is extremely endangered.[25]

Policy makers seem to be unaware of the implications of digital technology to long- term access to information. If at all they are aware, they seem to be giving inadequate attention to the issue. Perhaps, what is needed to draw their attention is something as scary as the Year 2000 (Y2K) problem.[26] For example, the Y2K problem prompted the World Bank to monitor all loans and credits to ensure that the

programs were Y2K compliant. On the other hand, its Information for Development Program (infoDev) was also offering grants to governments for planning and implementing national strategies linked to Y2K.[27]

National coordinating committees, which ensured compliance with Y2K standards, were the mainstays of SSA governments' involvement in solving the problem. Perhaps, we need the same strategy to deal with the preservation of electronic records in general, and in SSA in particular. In fact, it seems the threat of the disappearance of government digital information into obsolete technology and the fragile media is more substantial than the Y2K problem.

Way forward

The long-term strategy for preserving information in digital form encompasses the protection of the digital information for as long as that information has value to government and society. In that light, SSA countries should take advantage of the growing trend towards international co-operation in technological research and development and forge strategic alliances with countries and organisations that have made advances in digital preservation. Additionally, information professionals should play a visible role in helping their national governments to formulate policies that provide for procedures for the creation, use, disposition and preservation of electronic records. Equally, the creation of specialised training institutes as well as re-engineering national educational plans to include IT management skills should also be high on the agenda of information professionals in SSA.

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